

Interactive comment on “Source attribution of European surface O₃ using a tagged O₃ mechanism” by Aurelia Lupaşcu and Tim Butler

Anonymous Referee #2

Received and published: 27 July 2019

This is a well-written paper that provides a unique analysis of all of the source contributions to surface ozone in Europe over the spring to autumn months in 2010. By creating additional tracers of NO, NO₂ and their reservoirs to the chemical mechanism, the sources of ozone can be quantified without perturbing emissions (which changes the chemistry), as is frequently done for such analyses. This paper discusses in a comprehensive and clear manner the various contributions and their seasonal variation. A nice analysis of standard metrics (MDA8, W126, AOT40 and SOMO35) is also presented. I recommend publication after addressing the minor comments outlined below.

1. There are numerous grammar errors (missing articles, plural/singular mismatch, etc.) that should be corrected.

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2. In Section 3.1 more should be said about how similar this simulation is to the one evaluated in Mar et al. (2016) to assure the reader that the results of that evaluation are really relevant here.

3. The table captions in the supplement should more clearly explain the contents (units, etc.).

Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2019-225>,
2019.

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